Exercise 1 *Let f be a function defined as follows.*

$$f(x) = \begin{cases} x^2, & x < 0 \\ x, & x \geq 0 \end{cases}$$

(a) *Compute $f(1)$.*

$f(1) = \boxed{1}$

(b) *Compute $f(-1)$.*

$f(-1) = \boxed{1}$

(c) *The calculations in parts (a) and (b) above show that f is*

Multiple Choice:

(i) *neither even nor odd.*

(ii) *even but not odd.*

(iii) *odd but not even.*

(iv) *both even and odd.*

(v) *not odd, but f may not be even.* ✓

(vi) *not even, but f may not be odd.*

(d) *Compute $f(2)$.*

$f(2) = \boxed{2}$

(e) *Compute $f(-2)$.*

$f(-2) = \boxed{4}$

(f) *The calculations in parts (d) and (e) above show that f is*

Multiple Choice:

(i) *neither even nor odd.* ✓

(ii) *even, but not odd.*

(iii) *odd, but not even.*

(iv) *both even and odd.*

(v) *The calculations do not say anything about whether f is even or odd.*